

JUN 12 1961

Approved For Release 2003/01/30 : CIA-RDP81B00878R000600030155-7

LOCKHEED AIRCRAFT CORP.		ENGINEERING STUDY <input type="checkbox"/>		CHANGE PROPOSAL <input checked="" type="checkbox"/>		LAC -93-1*				
DATE 6-6-61		AFFECTS : WSPO <input checked="" type="checkbox"/>		PROJECT <input type="checkbox"/>						
NAME OF MAJOR COMPONENT		PART OR LOWEST SUBASSEMBLY		PART NO. & MODEL OR TYPE						
TITLE OF PROPOSAL : OXYGEN SYSTEM IMPROVEMENTS										
NATURE OF PROPOSAL :  SEE PAGE 2   *(Revised to include aircraft 388/721 and 394/954 - see Item 4.)										
REASON FOR PROPOSAL : To incorporate supplemental safety provisions in the ships oxygen system to reduce fire hazard without detriment to existing efficiency. Proposed improvement include: 1. Use of slow opening manual control valves in place of present automatic opening connectors and the on-off feature of the pressure reducers to eliminate high pressure surges and resulting adiabatic heating. 2. Removing the cockpit low pressure gage to prevent possible misinterpretation of indicated pressures. 3. Relocating the modified pressure reducers and (improved) relief valves from the cockpit to the Q-bay within a box for protection against grease and dirt. Except for the high pressure gage, only low pressure oxygen will be plumbed to the cockpit.										
ES		ESTIMATED COST AND TIME INVOLVED : ADDITIONAL FUNDING REQUIRED :								
CP		ESTIMATED COST FOR KITS OR PARTS : *See Page 3 ADDITIONAL FUNDING REQUIRED : *NONE (SP-1917)								
ITEMS AFFECTED BY PROPOSAL :										
SAFETY <input type="checkbox"/>	MISSION EFFEC- TIVENESS <input type="checkbox"/>	PERFORM- ANCE <input type="checkbox"/>	OPERATING PROCEDURE <input type="checkbox"/>	INTER- CHANGE- ABILITY <input type="checkbox"/>	WEIGHT OR WEIGHT & BALANCE <input type="checkbox"/>	TOOLS & SUPPORT EQUIPMENT <input type="checkbox"/>	MAINTENANCE PROCEDURE <input type="checkbox"/>	SERVICE LIFE <input type="checkbox"/>	FLIGHT MANUAL <input type="checkbox"/>	MAINTENANCE MANUAL <input type="checkbox"/>
EST. MAN/HRS. REQ'D. TO ACCOMPLISH CHANGE IN FIELD										
SOURCE OF PARTS FOR KIT  LAC				AVAILABILITY <u>17</u> WEEKS AFTER APPROVAL *Completed						
DISPOSITION OF SPARES AFFECTED Press. Switches re-usable as is: Press. Reducers reworkable: Lo-Press. Oxygen Gage & Automatic Opening Cylinder Valves not usable.										
INITIATED BY : Approved For Release 2003/01/30 : CIA-RDP81B00878R000600030155-7				APPROVED : WSPO ILLEGIB						

NATURE OF PROPOSAL:

1. Modify all aircraft (except 388/721 and 394/954) as follows:
  - a. Cockpit - Remove all oxygen plumbing and system components except the high pressure gage and the indicator lights in the L.H. side instrument panel. Replace the present Oxygen Console with a new Console Assembly (Lo-pressure only) which includes the two existing pressure switches, and two new slow opening needle valves for controlling the "primary" and "secondary" low pressure systems. (See Figure 1.)
  - b. Q-Bay - Install Box Assembly (dirt and grease shield) which includes new improved relief valves, and reworked pressure reducers.

NOTE: Existing pressure reducers will be reworked by removing the "on-off" handle, adding metal diaphragms and metal-to-metal seats. (Valve bodies will be unpainted aluminum on future production). The new relief valves will have a flow rating compatible with system capacity and will be vented overboard.
  - c. Oxygen Cylinders - Remove the existing automatic opening cylinder valves and replace with slow opening needle valves and pressure gages on each cylinder.
  - d. Modify plumbing to connect relocated system elements. Special fittings will be utilized to reduce to a minimum, the number of high and low pressure line connections. Revised installation procedure will require application of anti-sabotage paint to certify the security of each plumbing connection.

NATURE OF PROPOSAL: (Cont.)

2. Prepare and issue a Service Bulletin.
3. Fabricate appropriate aircraft provisioning kits.
- \*4. Modify aircraft 388/721 and 394/954 as follows:
  - a. Cockpit - Same as Item 1.a. except see Figure 2.
  - b. Q-Bay - Install improved relief valve and rework pressure reducers for both pilot and equipment operator in existing equipment operators left-hand side console.

NOTE: Existing pressure reducers will be reworked by removing the "on-off" handle. (Valve bodies will be unpainted aluminum on future production). The new relief valves will have a flow rating compatible with system capacity.
  - c. Oxygen Cylinders - Same as Item 1.c.
  - d. Plumbing - Same as Item 1.d.
  - e. Prepare and issue Service Bulletin 544.
  - f. Fabricate appropriate aircraft kits.
  - g. Service Bulletin 544 has already been installed in 388/721 and 394/954.

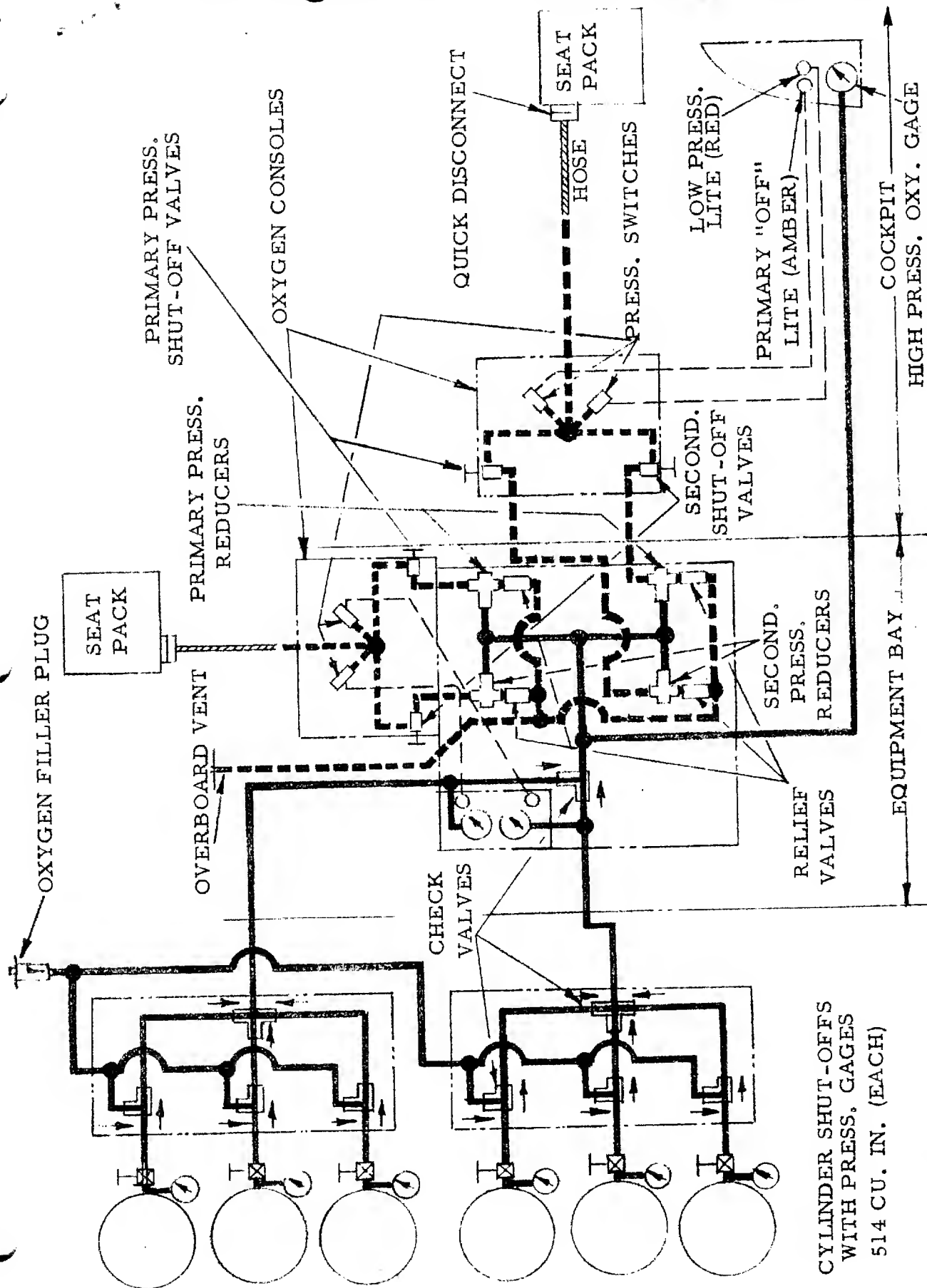
\* ESTIMATED COST FOR KITS OR PARTS:

Customer #2 - 2 kits

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Total Cost

ILLEGIB



CYLINDER SHUT-OFFS  
WITH PRESS. GAGES  
514 CU. IN. (EACH)

— HIGH PRESS. OXYGEN  
- - - LOW PRESS. OXYGEN

LEGEND

L.H. SIDE INSTRU. PANEL

FIGURE 2.